REMARKS

This is intended as a full and complete response to the Final Office Action dated July 25, 2008, having a shortened statutory period for response set to expire on October 25, 2008. Applicant submits this response to place the application in condition for allowance or in better form for appeal. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-6, 8, 10-40 and 42 are pending in the application. Claims 1-6, 8, 10-40 and 42 remain pending following entry of this response. The claims remain as reflected in the listing of claims.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 5, 6, 8, 10 -14, 16 - 21, 23, 26 - 30, 32, 34 - 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Leahy et al.* (US Patent Number 5,029,124, hereinafter "*Leahy*") in view of *Lee et al.* (US Patent Number 7,174,475, hereinafter "*Lee*").

Claims 3, 4, 15, 22, 24, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Leahy* in view of *Park* (US Patent Number 6,147,926).

The Examiner takes the position that it would be obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the strobe acknowledge signal of *Leahy* with the round-trip path of *Lee*. The Examiner further states that one of ordinary skill would be motivated to make such modification in order to reduce excessive clock skew to better coordinate the clock signal to avoid device failure.

Applicant respectfully traverses this rejection.

The Examiner bears the initial burden of establishing a prima facie case of obviousness. See MPEP § 2141. Establishing a prima facie case of obviousness begins with first resolving the factual inquiries of Graham v. John Deere Co. 383 U.S. 1 (1966). The factual inquiries are as follows:

(A) determining the scope and content of the prior art;

(B) ascertaining the differences between the claimed invention and the prior art;

(C) resolving the level of ordinary skill in the art; and

(D) considering any objective indicia of nonobviousness.

Once the Graham factual inquiries are resolved, the Examiner must determine whether the claimed invention would have been obvious to one of ordinary skill in the art.

Further, the Federal Circuit has held that even if all of the elements of a claimed invention are found in a combination of prior art references, analysis requires "consideration of two factors:

> (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and

> (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342 (Fed. Cir. 2007)

In this regard the Federal Circuit points out that in *KSR International Co. vs. Teleflex, Inc.*, 127 S. Ct. 1727 (2007) the Supreme Court "acknowledged the importance of identifying 'a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does' in an obviousness determination." *Takeda Chemical Industries, Ltd. v. Alphaphram Pty, Ltd.*, 492 F.3d 1350, 1356 (Fed. Cir. 2007).

Respectfully, Applicant submits that the Examiner has not properly characterized the teachings of the references and/or the claims at issue. Accordingly, a prima facie case of obviousness has not been established.

Applicant notes that the Examiner has failed to respond to the Applicant's argument (presented in the *Response to Office Action dated January 28, 2008*) that *Leahy* does not disclose transmitting, via a first signal path, a strobe signal to a receiving circuit, the strobe signal signaling the receiving circuit to latch in the first data on the data bus, and receiving a return signal transmitted via a second signal path, wherein the return signal is the strobe signal.
The arguments are reiterated below.

Regarding claim 1, *Leahy* does not disclose transmitting, via a first signal path, a strobe signal to a receiving circuit, the strobe signal signaling the receiving circuit to latch in the first data on the data bus, and receiving a return signal transmitted via a second signal path, <u>wherein the return signal is the strobe signal</u>. Claims 10, 16, 18, 27, 32 and 39 disclose similar claim limitations. The Examiner argues that the strobe signal and the return signal are found in Figure 2 (reference numbers 38 and 40, respectively) of *Leahy*.

As described in *Leahy*, reference numbers 38 and 40 are a DATA VALID signal and an ACKNOWLEDGE signal (*See Leahy*, col. 5, lines 59-63), where the DATA VALID signal indicates to a destination device that data being transferred to the destination device is valid, and where the ACKNOWLEDGE signal indicates to a source device that the data has been received. (*See Leahy*, col. 5, lines 59-63). Nowhere is it disclosed in *Leahy* that the DATA VALID and the ACKNOWLEDGE signals are one and the same. As shown in Figure 2, these signals are in fact two separate signals.

In contrast, Figure 1 of the application clearly illustrates that the return signal 122 and the strobe signal are the same 120. For example, the return signal 122 is tapped off from the strobe signal 120. In some embodiments, the strobe signal may also be inputted into a buffer 124, where the output of the buffer is the return signal 122 (as illustrated in Figure 1). Nonetheless, as a buffer is simply used to prevent any signal attenuation of the strobe/return signal, the return signal is still the same as the strobe signal. Therefore, *Leahy* does not disclose transmitting, via a first signal path, a strobe signal to a receiving circuit, the strobe signal signaling the receiving circuit to latch in the first data on the data bus, and receiving a return signal transmitted via second signal path, <u>wherein the return signal is the strobe signal</u>.

Therefore, the withdrawal of the rejection to claim 1, 10, 16, 18, 27, 32, 39, and the claims that depend therefrom is respectfully requested.

Regarding claim 6, *Leahy* does not disclose wherein a duration of time between issuing the strobe signal and receiving the return signal is substantially equal to a duration of time required for the strobe signal to propagate from a control circuit to the receiving circuit. Claim 20 discloses a similar claim limitation. The Examiner argues that *Leahy* discloses this element at col. 2, ll. 9-32.

However, the cited portion is directed to a source device that asserts a DATA VALID signal for every data word placed on data lines. *See Leahy*, col. 2, ll. 9-14. At the destination device, which receives the data words and DATA VALID signal, "the data words are received as fast as they are transmitted." *See Leahy*, col. 2, ll. 17-18. Therefore, "the destination device must strobe in a new data word each time the DATA VALID signal is asserted." *See Leahy*, col. 2, ll. 18-20. However, in some cases, the destination device may assert a TRANSMIT OFF signal which stops "the transmission of data words by the source device." *See Leahy*, col. 2, ll. 25-27.

Assuming that the Examiner is referring to the DATA VALID signal as a strobe signal and the TRANSMIT OFF signal as the return signal, nowhere is it disclosed in the above-cited sections of *Leahy*, that the duration of time between issuing the strobe signal and receiving the return signal is substantially equal to a duration of time required for the strobe signal to propagate from the control circuit of the receiving circuit, as disclosed in the present claim. Therefore, the Applicant submits that the Examiner has not properly characterized the teachings of the references and the present claim.

Therefore, the withdrawal of the rejection to claim 6, and the claims that depend therefrom is respectfully requested.

In addition, Applicant submits that the references, alone or in combination, fail to identify a reason or suggestion for combining/modifying the references to yield the elements as claimed.

Leahy discloses a burst mode asynchronous protocol, where the data transfer protocol uses a handshake procedure including the DATA VALID and ACKNOWLEDGE signals, as explained in *Leahy*, col. 3, line 46 to col. 4, line 41. In the burst mode

asynchronous protocol, a small synchronous burst of data is followed by an asynchronous handshake. *See Leahy*, Col. 5, lines 1-13. For example, a source device waits for an ACKNOWLEDGE signal from the destination device to be de-asserted. After the ACKNOWLEDGE signal is de-asserted, data words in the burst are transmitted from the source device to the destination device. Once the destination device begins to receive the data words, the destination device asserts an ACKNOWLEDGE signal any time after the first data word in the burst is received but before the last data word in the burst is received. Subsequently, the source device will interlock and handshake with the ACKNOWLEDGE signal prior to transmitting the next burst data. Accordingly, an asynchronous handshake is performed. *See Leahy*, Col 6, lines 28-45.

Lee discloses an approach for dynamically reducing clock skew among various nodes on an integrated circuit. To this end, Figure 6 of *Lee* discloses a return path 650-n for the clock signal associated with each node, which is matched to the length of the primary clock path 640-n, so that the clock skew present at the corresponding node can be estimated as 50% of the round trip delay time. *See Lee*, Col. 4, line 64 – Col. 5, line 7. Accordingly, delays in self-synchronizing delay circuits 630-1 to 630-n may be adjusted such that the corresponding clock signals arriving at each node are all in phase with a PLL. *See Lee*, Col, 4, lines 47-62. Thus, the excessive clock skew when distributing a clock signal to a plurality of nodes can be avoided.

Such a clock skew is not at all a concern in the asynchronous protocol disclosed by *Leahy*. In particular, the handshake signals of *Leahy* (*i.e.* DAVA VALID and ACKNOWLEDGE) need not be synchronized with corresponding signals on any other node. Furthermore, the handshake signals neither represent clock signals nor are they distributed to a plurality of nodes. Thus, the particular purpose and function of the return path of *Lee* simply has no applicability to the handshake signals of *Leahy*. Likewise, the handshake signals of *Leahy* have no significance in the context of the return path of *Lee*. In other words, the very elements of the respective references that the Examiner relies for purposes of the present rejection are fundamentally unrelated and incompatible with one another.

Further, in the Examiner's Response to Arguments, the Examiner provides additional rationale for motivation to combine *Lee* and *Leahy*. Specifically, the Examiner states "*Leahy* teaches data handling on a signal path in which data is transmitted on a first instance, and upon receipt of an acknowledge, transmits data on a second instance (*See Leahy* col. 6, ll. 28-45) and *Lee* teaches a synchronization method in which a return path is utilized to minimize delay time (*See Lee*, col. 4, ll. 47 – col. 5, ll. 7)." Thus, the Examiner concludes that "it would have been obvious to one of ordinary skill in the art to combine all the elements in a single strobe data system to yield a predictable result of minimizing delay in subsequent data transmission."

However, Applicant notes that the above-cited portion of *Lee* discloses that a return path is used to guarantee that all clocks in various nodes are in phase with a PLL clock, and therefore, not at all concerned with the minimization of delay time. Accordingly, the Examiner's assertion that *Lee* teaches a return path utilized to minimize delay time is fundamentally flawed.

Therefore, Applicant respectfully submits that the motivation indicated by the Examiner to combine the *Lee* and *Leahy* to yield a predictable result of minimizing delay in subsequent data transmission is defective.

Accordingly, Applicant submits there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one ordinary skill in the art, to modify the reference or to combine the reference teachings.

Therefore, the withdrawal of the rejection to claims 1, 10, 16, 18, 27, 32, 39 and the claims that depend therefrom is respectfully requested.

Therefore, the claims are believed to be allowable, and allowance of the claims is respectfully requested.

<u>Conclusion</u>

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

If the Examiner believes any issues remain that prevent this application from going to issue, the Examiner is strongly encouraged to contact the undersigned attorney to discuss strategies for moving prosecution forward toward allowance.

Respectfully submitted, and
S-signed pursuant to 37 CFR 1.4,

/Gero G. McClellan, Reg. No. 44,227/

Gero G. McClellan
Registration No. 44,227
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)